

COUNTRY ANALYSIS BRIEFS

Sakhalin Island

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Sakhalin Island's oil and gas resources are being developed by international consortiums.

Sakhalin I's oil production will begin in October 2005 at 250,000 bbl/d.

Sakhalin II produces oil for six months of the year at a rate of roughly 80,000 bbl/d.

Sakhalin Island

General Background

Sakhalin Island, a former penal colony located off the east coast of Russia and to the north of Japan, holds vast hydrocarbon resources. International consortia of energy companies have entered into production sharing agreements (PSAs) to develop the resources. Oil reserves in the area are estimated at around 14 billion barrels, and natural gas reserves at approximately 96 trillion cubic feet. Even though all of the consortia have extensive export plans (including to the United States) via LNG terminals and export pipelines to the mainland, there has been little progress except on the first two parts of Sakhalin Island: Sakhalin 1 and Sakhalin 2. These lie to the southeast of Okha (see map to the left). For more detailed maps click on the project websites for Sakhalin 1 and Sakhalin II below.



Sakhalin I

The [Sakhalin I](#) project is being led by Exxon Neftegaz, in conjunction with consortium members SODECO, ONGC Videsh, Sakhalinmorneftegaz, and RN Astra. The [consortium](#) members started drilling in May 2003 and expect preliminary oil production of 250,000 barrels per day (bbl/d) in October 2005. The project's oil output will be piped westward to the Russian port of De-Kastri and pumped into the Russian system. The first phase of the project will entail development of the Chayvo field, and subsequent phases will develop the Odoptu and Arkutun Dagi fields. Onshore processing facilities were completed to process the oil and natural gas from the field at a rate of 250,000 bbl/d and 800 million cubic feet per day (mmcf/d). The oil and natural gas will then be piped to the Russian mainland to the export terminal of DeKastri. Planned exports of oil to world markets, with the assistance of ice-breaking vessels, is scheduled for 2006. Sakhalin I's natural gas is expected to be sent southward to Japan via a proposed pipeline. The partners are planning for natural gas exports to Japan to begin in 2008.

Sakhalin-1 will be the largest single foreign direct investment in Russia. Capital investment over the life of the project could reach as much as \$12 billion. To date, the Consortium has spent over \$ 2.6 billion on various exploration activities, environmental studies, engineering design studies, infrastructure improvements, taxes and other expenditures.

Sakhalin II

The Sakhalin II project is being developed by Shell, Mitsubishi, and Mitsui, and entails the development of Russia's first LNG facility, to be built on the southern tip of the island, near the town of Prigorodnoye (see map). Construction of the project's two-train, 9.6-million-tons-per year facility began in early 2003, with Shell expecting initial LNG production beginning in 2007. LNG exports are scheduled to commence in 2008.

[Sakhalin II](#) will also be used to supply natural gas to the United States. In late 2004, Sakhalin Energy signed a contract with Coral Energy to supply 1,800 billion cubic feet (bcf) of LNG over 20 years to a power plant on the border of California and Mexico. The LNG will be delivered via tanker to the Energia Costa Azul terminal being constructed in Baja California, Mexico. In March 2004, Sakhalin II announced the sale of 300,000 tons of LNG per year to Japan's Tokyo Gas and Tokyo Electric Power (TEPCO) starting in summer 2008. In July 2005, the project operators announced a 20 year sales agreement of 1.6 million tons per year of LNG to Korea Natural Gas (KOGAS).

Some of these contracts have had to be renegotiated as the target start date for LNG exports has been delayed from late 2007 to mid 2008. The delays are mainly due to environmental hurdles and to rising costs. A recent [report](#) by the [World Conservation Union](#) expressed concern that a planned pipeline route from Sakhalin Island to Japan ([see map](#)) would harm Pacific gray whales. The consortium members had expected around \$5 billion in loans through 2006, but with the Phase II (LNG project and year-round oil production) cost raised above \$20 billion, Sakhalin Energy's CEO announced that those loans would not be forthcoming as early as the project's operators had hoped. For these reasons, LNG production has been delayed until at least 2008, and year-round oil production has been delayed until at least 2007.

Sakhalin II began crude oil production during 1999, averaging 80,000 bbl/d of production during July 2005. Completion of Phase II (sometime during late 2007) would increase daily production from Sakhalin II to around 180,000 bbl/d.

Sakhalin III-VI

Areas of Sakhalin Island lying to the north and southeast of Sakhalin I and II are at various preliminary stages of development. More information on these projects' development and expected production levels can be found on the [summary table](#) page.

Sakhalin Fact Sheet

Detailed project specifications and status for Sakhalin Island's energy development. Click the picture to download the table in Excel format.

Sakhalin Fact Sheet						
September 2005						
Sakhalin Island, a former penal colony located off Russia's eastern shore (see map), is home to five oil and gas projects, each operated by a unique international consortium. The five projects are currently in different stages of development, and two of the projects, Sakhalin I and Sakhalin II, also to bring oil and natural gas production online in the near term. Both projects have targeted Asian markets. Three blocks after Sakhalin VI have not been awarded yet.						
Name	Sakhalin I	Sakhalin II	Sakhalin III	Sakhalin IV	Sakhalin V	Sakhalin VI
Primary Field/Block Names	Odoptu (Northern and Southern) (onshore), Chayvo (onshore and offshore), Adulun-Dagi	Sakhalin Energy Investment Company: Pitun-Astokskoye, Lunskoye	Kinskii, Vostochno-Odoptu, Ayashkii	Pogranichny Block, Okuzhnoye field	Kagansk-Vasyukansk (active drilling)	Pogranichny
Oil/Gas Reserve Estimate	2.3 billion bbl, 17.1 Tcf	1.0-1.2 billion bbl of oil, 17.6 Tcf of gas	4-5 billion bbl of oil, 27-30 Tcf of natural gas	800 million bbl of oil, 19 Tcf of gas	4.4-5.7 billion bbl of oil, 15.2-17.7 Tcf of gas	800 million bbl of oil
Net Total Investment	\$2.6 billion (\$12 billion expected)	Phase 1: \$4.5 billion, Phase 2: \$9-10 billion over next 4-5 yrs.	\$13.5 billion expected (ExxonMobil: \$800m in geological studies)	\$2.6 billion expected	\$3.5 billion expected	n/a
Expected & Current Prod'n Level	Chayvo: 250,000 bbl/d (2005); Commercial gas prod'n expected in 2008	Current: 80,000 bbl/d for 6 months, Phase II: 180,000 bbl/d, year-round oil production expected in Dec. 2007, LNG prod'n expected in Summer 2008	n/a	n/a	n/a	n/a
Primary Project Developers	Exxon Neftegaz (30%), in conjunction with consortium members SODECO (30%), ONGC Videsh (20%), Sakhalinmorneftegaz (11.5%), and RN Astra (8.5%)	Sakhalin Energy Investment Company: Shell (55%), Mitsui (25%), Mitsubishi (20%)	Tender awarded to ExxonMobil and Texaco in 1992 annulled in Feb 2004. Developers undetermined.	BP (49%), Rosneft (51%)	BP (49%), Rosneft (51%)	Petrosakh, Alfa Eco
Current Status/Notes	Gas pipeline currently under construction	Oil production began in 1999; Processing terminal under construction which will have cpy of 66,000 bbl/d of oil, 1.8 bcf/d of gas	Likely possibly in cooperation with Gazprom will probably take part in new tenders for Kinskii and Vostochno blocks	Geological studies of reserves still being carried out	1st exploration well drilling began in July 2004	3 blocks in Sakhalin VI have not been awarded
Source: Project Homepages (see links section), Interfax, Russian Energy Monthly (www.easembizenergy.com), FSU Oil and Gas Monitor, Pipeline & Gas Jour						

Click image above for detail.

Links

EIA Links

[EIA: Russia Country Analysis Brief](#)

General Information

[Sakhalin I Project Homepage](#)

[Sakhalin II Project Homepage](#)

[Sakhalin II Project Overview Presentation](#)

Contact Info

cabs@eia.doe.gov

(202)586-8800

cabs@eia.doe.gov